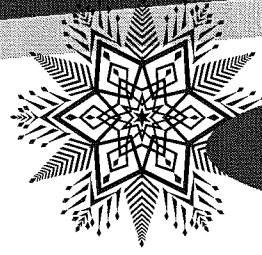
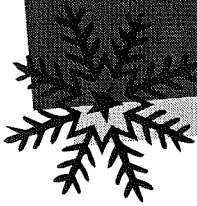


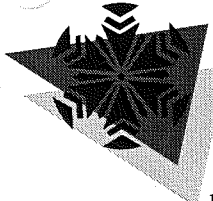
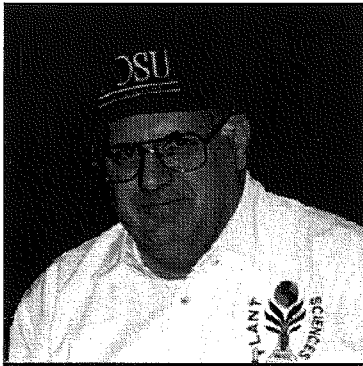


Blizzard Watch

NDSU – Department of Plant Sciences



2004-05



Well, here it is the 5th of January and I am finally getting started on the Blizzard Watch. All the good intentions and aspirations of having this issue all written and turned over to Edie Nelson, who helps me with it, by this date have been shattered again. Either the days are going faster or I am getting slower. I just can't seem to figure out which. I spent most of the Christmas vacation working on a departmental program review that was due the first of January, so I do have an excuse. It isn't that I was ignoring you or had forgotten about all of you. I do appreciate all of the nice comments that I receive from about the Blizzard Watch.

Belated Merry Christmas or Happy Holidays and Happy New Year to you and your loved ones from all the faculty, staff and students of Plant Sciences.

OK, being a true North Dakotan, after having spent much of my life here, I am going to start out by whining about the weather. It is -24 outside. Nuff said? This has been our coldest day of the winter of what has been a very cool year in general. The bright side is we have only about an inch of snow and there is no wind, which makes all the difference in the world. I grew up in Southwestern Montana at an elevation approaching 5,000 feet where the winter temperatures are similar to Fargo. The difference, however, is that there is no wind. Snow stays where it falls. I have never been as cold in my life as I was during the first winter I spent as an agronomist at the Williston Experiment Station. My boss, Ernie French, told me that the weather was really unusual that year and what we were experiencing was not normal. Hmm, where have I or when have all of you, heard that before? Anybody that spends any time in North Dakota hears that a few times each year. North Dakota weather is on average made up of a whole bunch of extremes--regardless if it concerns temperatures, rainfall, growing degree days, etc. Oh well, it keeps life interesting and gives us something to talk about.

- THE YEAR IN REVIEW
- New crop varieties
 - Woody plant introductions
 - UPRM collaboration
 - Historic Daylily Garden Dedication
 - Years of service honorees
 - Faculty promotions
 - Award winners
 - Dr. Carter's Memo

All is going well in the department and college. We have a lot of graduate students, and the undergraduate numbers seem to be stable for the time being at least. We have a strong faculty and great support staff. The only glitch is that we have about three faculty positions I have been unable to refill. I am working on that.

Vice-President Pat Jensen announced her resignation effective December 31, 2004. She intends to pursue some of her personal career goals. Duane Hauck will continue as Director of Extension and Dr. Ken Grafton will continue as Director of the Experiment Station. On January 1, 2005, Ken was also appointed Dean of the College. This brings us back



to a system that is very close to what we had when Dr. Roald Lund was Dean and Director and Dr. Myron Johnsrud was Director of Extension. The system has always worked well. We are currently advertising for someone to replace Pat Jensen. The new title of this position will be Vice-President of Agriculture and University Extension. The closing date is in early February or until an acceptable candidate is found. I am a member of the search committee and intend to work hard to find the best person available. We have always had tremendous support for agriculture from President Chapman, who has said many times that NDSU cannot be a great land grant university unless we have a great agriculture college. Duane Hauck and Ken Grafton have been doing, and continue to do, an excellent job of leading extension and research with their very frequent interactions with legislators. Sharon Anderson, who served as Director of Extension, retired December 31, 2003. Sharon certainly left her mark on NDSU; she was a great leader of NDSU extension.

North Dakota continued to grow a wider diversity of crops than almost any state in the nation. The North Dakota State Seed Department certified 278 varieties of 20 different crops. Statewide, North Dakota grew 312,660 certified acres of seed. I believe we have one of the largest state seed departments and the largest seedstocks project in the United States.

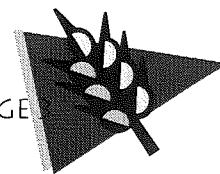
Overall crop production in eastern North Dakota continues to move toward soybean and corn production. Statewide in 2004, reported state acreage was as follows: HRSW 6.0 M, hard amber durum 1.8 M, soybean 3.7 M, CRP 3.3 M, corn 1.8 M, barley 1.4 M, sunflower 0.85 M, canola 0.77 M, fallow 0.74 M, alfalfa 0.61 M, flax 0.48 M, pinto beans 0.41 M, dry peas 0.31 M, sugar beets 0.254 M, etc.

As I indicated, this year's growing season was cooler than normal. Producers were able to get into the field very early, but then the rains began and it was a long time before many were able to get back into the fields to plant, if at all. I visited with a producer near Bowbells in NW North Dakota who was able to plant his spring wheat early. Immediately after planting and before emergence, the crop received 6 inches of snow. This was, however, the only crop he was able to plant all year. When I last saw him this summer, he had been able to plant only about 25% of his farm. The rest he had to fallow. At the Carrington Research and Extension Center in the central part of the

state, temperatures for April, May, June, July, August and September were approximately 3+, 3-, 3-, 3-, 6- and 3+ degree below or above normal. Corn-growing degree days at Carrington from May to September were 1692 compared to the normal of 2058. Even though many of the row crops (corn, soybean and dry bean) were sown in time, the cool temperatures and resulting low degree growing days slowed maturity. On August 19, a frost occurred in many parts of the state. The northern part of the state was especially hard hit. North Dakota is the leading producer of both pinto and navy beans in the nation. The frost completely destroyed 48% of the pinto beans and 43% of the navy beans in the state. If the growing season temperatures had been normal, the dry bean industry would not have suffered any losses and the frost would have, in fact, helped dry down the maturing dry beans. However, because the plants were at a much earlier state of maturity, they were destroyed and not harvested. The damage was also extensive to soybean and corn in northern parts of the state, but to a lesser degree than dry beans. The frosted area even went into central and southern Minnesota. To give you an idea on how cool the summer was, on August 29 only 2% of the corn was dented compared to a long-term average of 50%.

There was a light at the end of the tunnel, as temperatures in October and especially November were well above average. If it had not been for the high temperatures and good drying conditions, especially in November, much of the corn and soybean crop would never have been harvested. We had a couple of days in November when we had warmer temperatures than we did July 4th. Please let me know if we are having global warming or global cooling. It is all too confusing for this farm boy to figure out.

Diseases were not an overwhelming factor influencing the state's overall crop production this year as they had been in some years past. White mold was again a problem in some of the row crops. Fusarium head blight was a problem in isolated areas only. Many of the rusts were present, but were for the most part not major factors influencing overall crop production. Overall, small grain crops were excellent for the second year in a row. Statewide, with the exception of dry beans, row crop yields were just below normal. Again, it was not uncommon to see soybean and corn piled outside elevators and along railroad tracks as we again had a lack of rail cars. NDSU developed varieties continue to lead the state acreage in



all of the small grains and in most other crops. I am really proud of the job that NDSU does for the state and region in agricultural research, extension and teaching.

Much of the controversy concerning transgenic wheat died down for the time being when Monsanto announced they were closing their program to develop roundup ready wheat. A casualty of this was a petition drive to collect signatures for a referral of transgenic crops. Apparently the required amount of signatures was not received. As I indicated in last year's Blizzard Watch, I was a member of a co-existence committee, whose function was to attempt to develop recommendations for the productive co-existence transgenic and non-transgenic crops. The results of that committee are now available on the web at: www.ag.ndsu.nodak.edu/coexistence/. This information appears to be watered down for those of you that are against transgenic crops. On the other end of the spectrum, those of you who have strong feelings in favor of transgenic crops may consider it too restrictive. It is, if nothing else, the first step of what will be a journey on a rocky path.

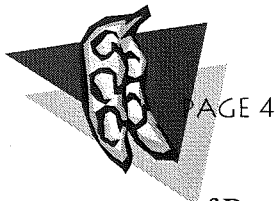
I continue to be a strong supporter of transgenic research and transgenic crops. One only needs to look at the problems our sugar beet growers are having with herbicide resistant Kochia. Roundup ready sugar beets, which are available, would solve the problem, but the industry is hesitant to use them because of consumer backlash. One of the concerns expressed by opponents of transgenic crops is that weeds will become resistant to herbicides. Weed resistance to herbicides is nothing new as it has been happening for years. The solution is to continue research and development in new herbicides and their corresponding mechanisms of action. The universities often do not have the facilities and certainly not the financial means to extensively develop transgenic material. This type of research is done mostly by private industry. This leaves the universities between a rock and a hard place in that we need to be involved with private industry to make our varieties competitive and beneficial for those that have an interest in the transgenic crop production, and at the same time consider the opinions of those who oppose transgenic crops.

This year, NDSU implemented research fees on all types of wheat, barley, oat and flax in North Dakota and surrounding states. We have had research fees

on a number of crops including potato, soybean and dry bean and all varieties of all crops that are grown outside the U.S. for several years. The decision made this year will extend these research fees to new varieties of the crops mentioned. The research fees are 30 cents/bu for hard red spring and durum wheat, 25 cents/bu for barley, 20 cents/bu for oat and 40 cents/bu for flax and will be collected on both the registered and certified classes of seed sold. I generally support the research fees. One side tells me that the taxpayers have already paid for the varieties by supporting their development. On the other side, a series of budget reductions the past few years have crippled many of the research projects. Fortunately, we receive a tremendous amount of support from the commodity groups. Without their support and the almost \$5M in grants that our faculty wrote last year, we would not be in a position to conduct any meaningful research. Thus, although in an idealistic sense research fees are undesirable, in a realistic world, their time has come.

Our plant breeders continue to be as productive as ever. We did have one incident this year which hit a real sour note for many of us. In one of our small grain nurseries at Langdon, we had some theft occur when someone went into a segregating wheat nursery and selected over 100 heads, before our breeder was able to make any selections. I know our material is good, but is it worth stealing and jail time? Apparently some individuals think so and this is a way to make up for their own creative inadequacies and lack of moral character.

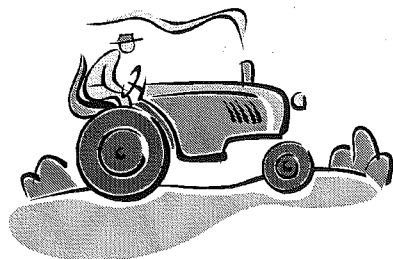
On a much more positive note, last summer NDSU released 'Eclipse', a black dry edible bean variety, which is a type that is growing in popularity in the U.S.; 'Beach', an oat variety geared for the race horse industry, which purchases a lot of North Dakota grown oats; and 'Carter', a yellow-seeded flax which has about a 10% yield advantage over 'Omega', also a yellow-seeded flax. Yellow-seeded flax is grown mostly for export to Europe. The name Eclipse is appropriate for a black bean variety, while Beach is named after Beach, North Dakota. Carter is named after Dr. Jack Carter, professor emeritus in our department and former department chair. In his semi-retirement, Dr. Carter has become a strong proponent of flax and its positive merits for human food and for use as a livestock feed. He has made a dramatic impact on North Dakota agriculture even in his retirement. These three varieties were from the breeding



programs of Drs. Grafton, McMullen and Hammond, respectively.

At a variety release meeting held on January 18th, 2005, the following crops had lines that were released. 'Glenn', a HRSW, combines the two sources of wheat scab resistance found in 'Alsen' and 'Steele-ND'; 'Stellar', a six-rowed barley with potential malt usage has high yield, low protein and a high percentage of plump kernels; and 'Pembina', a conventional soybean. Pembina is an early-maturing variety that yields slightly less than Jim, but matures three days early. Its area of adaptation will be the northern tier of North Dakota counties. 'ProSoy', a high yield tofu soybean line, was also released.

I recently came across a couple of motion pictures containing plot research and wheat breeding that Dr. Glenn Smith, a former NDSU wheat breeder, took some time in the early 50's. They will be of special interest to those of you that are plant breeders. The pictures can be found on the web at <http://www.ag.ndsu.nodak.edu/plantsci/glenn.html>



OTHER IMPORTANT AND EXCITING EVENTS

NDSU, along with the department, is close to signing an agreement with the University of Puerto Rico, Mayaguez (UPRM) to establish a collaborative PhD program in Plant Breeding and Genetics. The main goals of the agreement will be to (1) encourage students at UPRM to pursue graduate studies and degrees in agricultural research and (2) provide a means for faculty at UPRM to help mentor advanced degree students in agriculture. The students will have co-advisors from NDSU and UPRM. Any students that enroll must meet the same requirements as all other PhD candidates in the department. The degrees will be granted by NDSU. The students will be required to spend a minimum of one year in residence, including taking classes on the NDSU campus. Over the years we have had several excellent PhD students who came to NDSU from UPRM to receive degrees in plant breeding and genetics.

There were also a number of woody plant introductions from Dale Herman's research program. These include:

Prairie StatureTM Hybrid Oak (2005) *Quercus x bimundorum* 'Midwest'

Prairie ReflectionTM Laurel Willow (2005) *Salix pentandra* 'Silver Lake'

Trademark Registrations were received for the following introductions:

Prairie Dream[®] Paper Birch (2002) *Betula papyrifera* 'Varen'

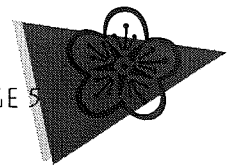
Prairie Horizon[®] Manchurian Alder (2003) *Alnus hirsuta* 'Harbin'

Prairie Torch[®] Hybrid Buckeye (2003) *Aesculus x* 'Bergeson'

Always remember, although the plant breeders are the leaders of the projects, the development of a variety or plant introduction is a collaborative effort that includes several scientists in our department and on campus, the USDA and the scientists and staff at the Research Extension Centers throughout the state. It is not a one person, one department project--it is a team effort.

It was again good to visit and see all of you that attended our annual North Dakota Blizzard Party in Seattle. I appreciate your support of our department and especially your nice comments about the Blizzard Watch. If there are topics you would like to see concerning department happenings, please let me know. I try to cover all the high points (there are no low points in our department), but I may be missing something that may be of interest to some of you. I am going to start sending a couple of our office staff to some of the meetings each year. It will give them an opportunity to see what some of the other universities are doing relative to posters, presentations, student awards, etc.

We had seven faculty, six graduate students and seven undergraduates attend the ASA meetings in Seattle in November. The undergraduates won sec-



ond place in the Agronomy Quiz Bowl, losing to Virginia Tech. I am really pleased with both our graduate and undergraduate students. I would put them up against graduates from anywhere in the U.S.

The North Central Weed Science Society meetings were held in Columbus, Ohio in mid-December. Four faculty and three graduate students attended.

The Western Weed Science Society meetings were held in March in Colorado Springs, CO. Four faculty and three research specialists attended.

The Weed Science Society of America meetings were held in February in Honolulu, Hawaii. Four faculty and one research specialist attended. It always amazes me how many more faculty attend these meetings when they are in Hawaii, especially when it is winter in North Dakota. It must be something about the warm weather in that tropical paradise, which sparks creative thoughts. I should try it some time. Although I should not complain, I got to go to Des Moines, IA in mid-January, followed by a trip to Bismarck. Let's face it, I have no life. Seriously, the trip to Des Moines was very interesting. After the meeting of chairs in the North Central region was over, we toured the headquarters of Pioneer. I was surprised by the number of NDSU graduates that hold high positions in the company. I am proud of them all.



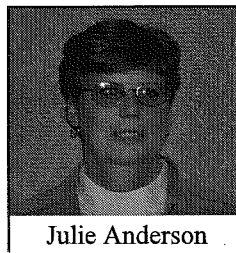
The American Society of Horticultural Science meetings were held this year in Austin, TX in mid-July. Two faculty and one graduate student attended.

This year's American Association of Cereal Scientists meeting was held in San Diego, California in mid-September. Dr. Frank Manthey attended, along with three graduate students.



Dr. Abbas Lafta returned to the department after spending a year teaching at the American University in Beirut, Lebanon.

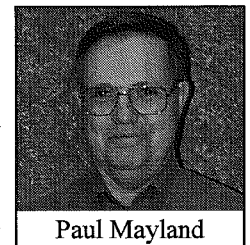
No new faculty was hired this year. We still have three vacancies as a result of budget reductions, but we face an uphill battle in filling two of these positions as they must be reappropriated by the legislature. In spite of the fact that the state budget has a surplus, it will be difficult to get any funding. The legislature faces a list of requests from a number of state agencies. NDSU, the experiment station and extension are just a small piece of the pie. I do not envy the job of the legislators. It is a tough call, but the return on investment from cost associated with agricultural research is tremendous. The varieties from our breeding projects alone generate enough added income to support the entire experiment station. The rest of the research benefits are just gravy.



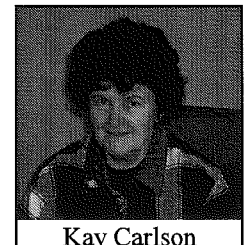
Julie Anderson

There were no retirements among the faculty. In the support staff Tammy Erdmann resigned from pesticide certification and now works in the Art Department. She was replaced by Julie Anderson.

Among the staff, Paul Mayland, who worked with Dr. Hatterman-Valenti, and Kay Carlson, who worked many years with Dr. Maan and most recently for Dr. Cai, retired. John Osborne, who worked with Dr. Manthey, resigned and Lois Berglund, who worked with Dr. Chakraborty, left NDSU. Heather McNamara, who worked with Dr. Paul Schwarz, moved to Veterinary and Microbiological Sciences.



Paul Mayland



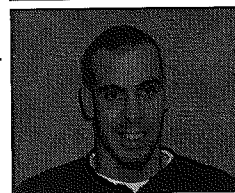
Kay Carlson



Rachel McArthur transferred from Dr. Dahleen's USDA project to Dr. Cai's project. Collin Auwarter will work as support staff of Dr. Harlene Hatterman-Valenti in the high value crop project. Other hires are Sarah Underdahl, who works with Dr. Elias in the durum wheat breeding project; Jeremiah Halley, who works with Dr. Mergoum in the HRSW breeding project; and last but not least, Jeremy Pederson, who left the durum wheat breeding project to become Dr. Dale Williams' assistant with the seedstocks project. Jonathon Neubauer was hired as a chemist to work with Dr. Manthey.



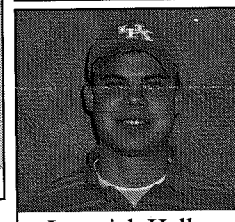
Rachel McArthur



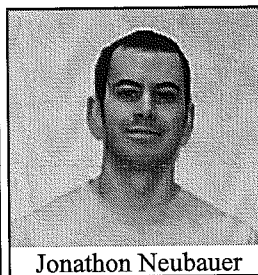
Collin Auwarter



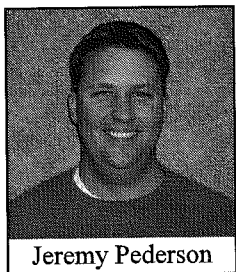
Sarah Underdahl



Jeremiah Halley



Jonathon Neubauer



Jeremy Pederson

ates feel very good about the education that they are receiving or did receive. Generally, students who had graduated in the past five years rated us higher than the students currently in school. This is to be expected, as students currently enrolled are being exposed to areas that they feel they will never use and are a waste of time. Once they graduate, however, they use some of the information they thought unimportant and then realize its importance in their everyday jobs. The students were generally satisfied with our curriculum, but a few indicated we should place less emphasis on specialty crops and increase emphasis on the more widely grown crops. Nearly 40% of both groups were enrolled in a club while at NDSU and felt it was an extremely useful and gratifying experience that added to their education and personal growth. The graduate program received the highest rating of any of the programs, with 86% of the former students indicating that they were "very satisfied" with the education they received and felt NDSU had prepared them well for their careers. Former graduate students felt a need for increased emphasis in business courses. In general, the graduates indicated that the department provided a conducive atmosphere for learning and students felt they 'belonged' and were welcome in the department, despite the large number of students and projects. The report was shared with all the faculty and higher administration. If any of you would like a summary copy, please let me know and I will send you one.

Plant Sciences seems to have few personnel problems. I attribute this to Dr. Carter and the fine faculty he hired. The older faculty that he hired serve as role models for many of our younger faculty. The positive attitudes and strong work ethic of our entire faculty carry over to the staff and our students.

As many of you know, a year ago I selected Dr. Rod Lym to assist me in some of my duties, which are, at times, overwhelming because of the size of our department. I try my very best to not load a lot of work on Rod as he still maintains his research and teaching responsibilities. He has done a number of projects for me that I quite simply did not have the time to tackle. He also takes my place when I am out of town. I think he has been a little disappointed that nothing exciting or controversial has happened. I am just the opposite as I like it better when nothing exciting happens when either of us is in charge.

One of the projects that Rod did was to survey our current undergraduate and graduate students and those who had graduated in the last five years with a B.S., M.S. or Ph.D. degree from our department. The results were interesting and confirmed that our gradu-

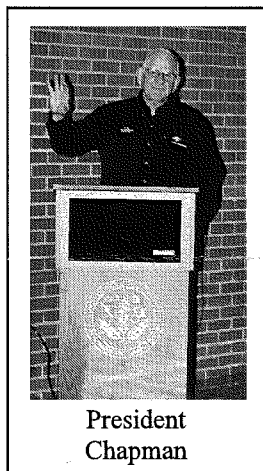


Last year I mentioned we had a ground breaking for Phase I of the Horticultural Demonstration and Research Plots. The site is located at the corner of 12th Avenue North and 18th Street and will be used for extension, research and teaching. Funding for Phase II, which includes a building and a small greenhouse for extension, research and teaching purposes has been requested. The site was designed by Andrea Carlson, who was an undergradu-



ate in Horticulture, and is now a graduate student in Horticulture in the non-thesis option. One of her tasks will be to complete the garden design, including Phase III, which will contain a number of different horticultural topics.

Under the leadership of Wayne Larson, a graduate of our department, and with a lot of hard work by Barb Laschkewitsch and others in the department, and crews from Facilities Management (Buildings and Grounds), the garden is developing nicely. On October 30th, in conjunction with the NDSU Harvest Bowl, we dedicated the NDSU Historic Daylily Garden. The garden holds some of the oldest historic daylily varieties in the U.S. and is the only historic garden of its type at any land grant university in the U.S. The dedication was scheduled to be held at the garden, but a heavy rain the previous evening made that impossible, so the dedication was moved to the Atrium in Loftsgard Hall. If we would have had the dedication at the garden site, some of those attending would still be stuck in Fargo clay. It was an exciting day. Featured speakers were President Chapman; Mary Baker, Region I Vice President of the American Hemerocallis Society from Omaha, Nebraska; Pat Jensen, Vice President and Dean of the College of Agriculture, Food Systems, and Natural Resources; and Karen Schock, President of the Central North Dakota Daylily Society, from Bismarck. Canadian Prairie Daylily Society President Janice Dehod from Winnipeg also attended. Because of the wet conditions, those that had not yet visited the garden will have to wait until next summer to view the garden and the dedication plaque.

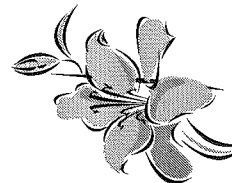


President
Chapman

Another feature of the garden will be the Art Jensen Iris Collection, which was donated to NDSU. After a lot of hard work by many individuals under the tutelage of Barb Laschkewitsch, all the Iris were finally moved to campus. The next task will be to identify many of the varieties and eliminate duplicates. We do not know for sure how many Iris varieties we have, but expect it to be in the hundreds. Both the Daylily and Iris gardens will continue to grow and be expanded by purchasing additional material when-

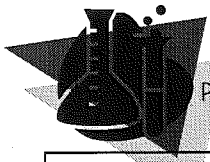
ever possible.

The perennial flower bed, which is located where the business building will be built, will be moved this spring and summer. The annual plant evaluation garden will be located in the new garden area this year.

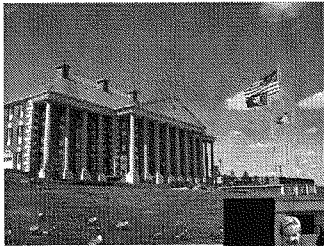


On March 12 & 13, 2004, the NDSU Plant Sciences Graduate Student Association hosted the 20th Annual Plant Science Graduate Student Symposium on the NDSU campus. Congratulations go to NDSU graduate students Ken Lamb, who received second place in the genetics/biotech section for his presentation 'Mapping Genes Conferring Resistance to Fusarium Head Blight in a C93-3230-24 Accession' and Marcelo Melani, who received first place for his presentation 'Identification of Alternative Maize Heterotic Patterns for the Northern Corn Belt' in the plant breeding section. The 21st annual Graduate Student Symposium is going to be held in March 2005 at the University of Saskatchewan. It is a good experience for students from the University of Manitoba, University of Saskatchewan and NDSU to meet and talk about their research, graduate school experiences, etc. The NDSU Plant Sciences Graduate Student Association officers for 2004-2005 are Juan Osorno, President; Marcelo Melani, Vice-president; Kiran Oberoi, Treasurer and Arielle Ehli, Secretary.





As many of you know, each year I take the secretaries on an outing for a day, usually in August. This year we visited the Terry Redlin Art Center in Watertown, South Dakota. If any of you are Terry Redlin fans, the museum is a real treat. I am not sure how many original paintings the building holds, but they are very beautiful and sometimes very emotional. They carry many of us that are older, back to a time when life was a little simpler. Not necessarily better, but simpler. I would recommend it to anyone traveling through northeast South Dakota.



Redlin Art Center



l-r: Eileen, Robin, Michelle, Mary Beth, Edie, Melissa, Lisa, Char, Tammy, Louise, Sue

Students

Several M.S. students completed their degree requirements this year. The students, their advisors and current status are: Ann Erickson (Dr. Lym), Invasive Species Control Spec. MPS, Haleakala National Park, Maui, HI; Alyson Hyrkas (Dr. Carena), Scientist USDA, Illinois; Marcelo Melani (Dr. Carena), Ph.D. student, Department of Plant Sciences, NDSU, Fargo, ND; Mary Osenga (Dr. Kianian), Lab Technician, Vet & Micro Sciences, NDSU, Fargo, ND; Laurie (Janzen) Richardson (Dr. Lym), Botanist, Theodore Roosevelt National Park, Medora, ND; Andrea Travnicek (Dr. Lym), Environmental Scientist, HPLC Inc., Bismarck ND; and Saujanya Yalla (Dr. Manthey), Quality Control Supervisor, Carolina Foods Inc., Charlotte, NC.

New graduate students and their advisors include: Marisol Tatiana Berti, Chile (Dr. Johnson); Aaron Carlson, Milaca, MN (Dr. Dexter); Andrea Carlson,

Hibbing, MN (Dr. Smith); Eric Delahoyde, Cogswell, ND (Dr. Zollinger); Arielle Ehli, Lidgerwood, ND (Dr. Thompson); Emma Gamotin, Phillipines (Dr. Berzonsky); Robbie Holthusen, Wahpeton, ND (Dr. Johnson); Sara Krippner, Kimball, MN (Dr. Howatt); Sujan Mamidi, India (Dr. McClean); Monika Michalak, Poland (Dr. Kianian); Luke Samuel, Fargo (Dr. Lym); Jesse Underdahl, Hebron, ND (Dr. Mergoum); Deborah Willard, Barnesville, MN (Dr. Hatterman-Valenti); and Zeng Cui Zhang, China (Dr. Faris and Dr. Xu).

We currently have a total of 71 full time graduate students in the department. An additional fourteen staff are working part time toward advanced degrees.

Scholarship Recipients

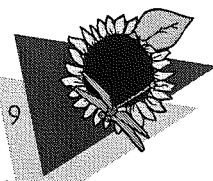
2004-2005 scholarship recipients are as follows: (hometowns are in ND, unless otherwise noted)

Horticulture Curriculum:

Harry C. Baker Memorial Scholarship, \$200: Kari Wanner from Hebron; **Jack F. Carter Plant Sciences Undergraduate Scholastic and Leadership Scholarship**, \$500: Melody (Webster) McConnell, Beulah; **Harry A. Graves Memorial Scholarship**, \$145: Valerie Eitrem from Garretson, SD; **Margaret Haedt Memorial Scholarship**, \$150: Jill Jerve from Montevideo, MN; **Horticulture and Forestry Club Scholarship**, \$300: Chad Burrer from Wing; **Hovland-Jensen Scholarship Fund**, \$270: Pam Murdock, Vadnai Heights, MN; **Ruth M. Johnson Scholarship**, \$190: Kevin Michener from Hatfield, PA; **Mainline Potato Company**, \$100: Ashley Braun, Mellette, SD; **North Dakota State Horticultural Society Scholarship**, \$750: Melody (Webster) McConnell from Beulah; **Henry R. and Corinne Foley Peterson Horticulture Scholarship**, \$455: Michele Duppong from Glen Ullin; **H. Donald Piepkorn Scholarship**, \$300: Megan Lee Albers from New Salem; **Earl Scholz Scholarship**, \$100: Aimee (Stockman) Thapa from Williston; **A.D. Stoesz Memorial Scholarship**, \$365: Bethany Vandervorst from Bismarck; **W. Allan and H. Lucile Watt Scholarship**, \$185: Suzanna Kuchera from Wyndmere.

CWS Curriculum:

Arthur Companies/Joe Burgum, \$260: Mark Bata



from Adams; **Jack F. Carter Plant Sciences Undergraduate Scholastic and Leadership Scholarship**, \$500: Jenna Jansen from Breckenridge, MN; **CHS (Cenex Harvest States) Cooperative Foundation Scholarship**, \$500: Sarah Gegner from Redwood Falls, MN; **CHS (Cenex Harvest States) Cooperative Foundation Scholarship**, \$500: Kirk Rabenberg from Britton, SD; **James R. Dawson Scholarship**, \$300: Kelsey Steenblock from Campbell, MN; **Irvin T. Dietrich Scholarship (NDAA)**, \$500: Jason Thomas from Mandan; **Russell and Anna Duncan Foundation Scholarship**, \$490: Adam Larson from Willow City; **Russell and Anna Duncan Foundation Scholarship**, \$490: Kyle Schepp from Newburg; **Travis Engstrom Memorial Scholarship**, \$500: Scott Weinlaeder from Drayton; **Ernie French CWS Scholarship**, \$500: Lucas Peterson from Mohall; **Lars A. Jensen Scholarship (NDCISA)**, \$610: Sheldon Gerhardt from Mandan; **Donald Kenna Scholarship (NDAA)**, \$500: Nathan Cook from Valley City; **H.R. Lund Freshman PLSC Scholarship**, \$500: William Mack from Park Rapids, MN; **George Meagher Scholarship**, \$1000: Jenna Jansen from Breckenridge, MN; **George Meagher Scholarship**, \$1000: Diana Hanson from Crookston, MN; **Monsanto Ag. Products Co. Scholarship**, \$500: Seth Fore from Mentor, MN; **Monsanto Ag. Products Co. Scholarship**, \$500: Patrick Erickson from Badger, MN; **Glenn A. Peterson Memorial Scholarship**, \$500: Jena Flaten from Portland; **Glenn A. Peterson Memorial Scholarship**, \$300: Sheri Kem-

nitz from Cavalier; **Chuck Rongen Scholarship (NDAA)**, \$500: Luke Kuster from Reynolds; **P.C. Sandal Memorial Scholarship**, \$500: Lukas Wagner from Towner; **Harry and Lillie Seidel Agriculture Scholarship**, \$1,000: Elizabeth Bruins from Arnegard; **Theodore E. and Marguerite R. Stoa Freshman Scholarship**, \$280: Sheri Kemnitz from Cavalier.

Graduate Students:

H.L. Bolley Graduate Scholarship, \$760: Rebekah Oliver from Pelican Rapids, MN; **Jack F. Carter Plant Sciences Graduate Scholastic & Leadership Scholarship**, \$1000: John Davies from Australia; **Gustav N. Geiszler Memorial Scholarship**, \$300: Gauri Nazre from India; **John H. Longwell, Jr. Memorial Scholarship**, \$225: Guorong Zhang from China; **Devin Miller Memorial Scholarship**, \$400: Marcelo Melani from Argentina; **Eric Matthew Miller Memorial Scholarship**, \$1,000: Snigdharani Dash from India; **Monsanto Graduate Student Scholarship**, \$500: Aruna Kandikonda from India; **Monsanto Graduate Student Scholarship**, \$500: Kevin Jacobson from Crookston, MN; **Charles and Linda Moses Presidential Graduate Fellowship**, \$5100: Rongshuang Lin from China; **John D. Nalewaja Graduate Scholarship**, \$600: Jamie Kloster from Buxton; **ND Dry Edible Bean Seed Growers Scholarship**, \$1000: Xiaoke Wang from China; **PLSC Graduate Scholarship**, \$225: Xunfen Chen from China; **Smith Fellowship for Foreign Graduate Students**, \$410: Juan Caffarel from Uruguay.

Faculty, Staff & Student Awards



Duane Hauck and Ron Smith

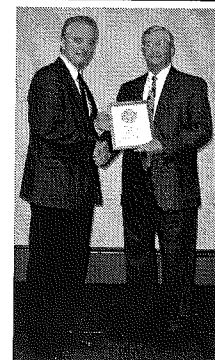
Dr. Ron Smith was honored for 20 years of service with NDSU Extension.

Louise Heinz of our office staff was honored for 20 years of service to NDSU.

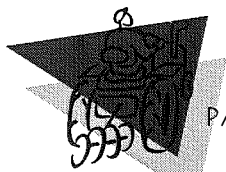


Duane Hauck, Louise Heinz and Pat Jensen

Jim Faller, who works in the HRSW research project, Dr. Frank Manthey and Dr. Rod Lym became members of the Quarter Century Club for 25 years of service to NDSU. Dr. Alan Dexter was honored for 35 years of service to NDSU Extension.



Duane Hauck and Alan Dexter



Dr. Rod Lym was named 'Communicator of the Year' by the Department of Agriculture Communication and the North Dakota Association for Communication Excellence. This is quite an honor as Rod is the first non-extension person to receive this award. Although Rod does not have an extension appointment, he has been a key person in many extension publications and extension presentations dealing with invasive weeds. **Way To Go!**

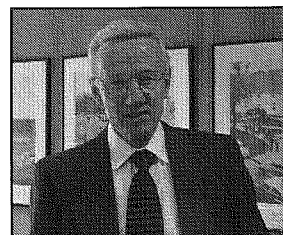


Rod Lym

Denise Markel, an M.S. graduate from Plant Sciences who works at the North Central Research and Extension Center in Minot, received an agricultural award endorsed by Rutgers and other universities. The award is part of a government/university partnership called the Interregional Research Project No. 4 (IR-4) headquartered at Rutgers. Criteria for the award involve keeping track of chemicals that are labeled for major crops like wheat, corn and soybeans.

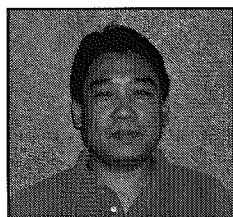
Mark Hatzenbeller, a graduate student of the department, received a \$2,500 Ecolab scholarship from the American Society of Brewing Chemists Foundation for the 2004-05 academic year. Congratulations Mark!

Ed Deckard has been named one of 12 nationwide "exemplary teachers" for the National Case Study of Learner-Centered Approaches in Colleges of Agriculture. The purpose of the national case study is to examine the nature and impact of learner-centered approaches to teaching in colleges of agriculture in the United States.



Ed Deckard

Nominees were chosen based on their use of active, inquiry or service learning, and willingness to participate in the national case study representing their particular college or university in agriculture, food and natural resources. As an exemplary teacher, Deckard participated in a teaching and learning conference in Gainesville, Florida in June, 2004. **Congratulations Ed!!**

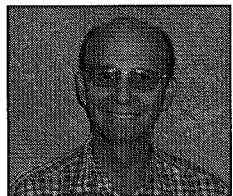


David Dai

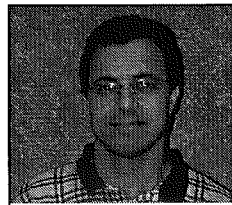
Recently three of our faculty, David Dai, Joel Ransom and Mike Christoffers were elected to the University's Faculty Senate. Elected to the University Senate Campus Space and Facilities Committee was Marcelo Carena and to the Grade Appeals Committee as an alternate was Mohamed Mergoum.



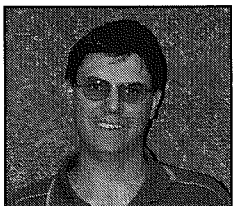
Marcelo Carena



Joel Ransom



Mohamed Mergoum



Mike Christoffers



Chiwon Lee

Faculty and staff in the College of Agriculture, Food Systems, and Natural Resources were recognized for their service during an awards program Dec. 6, 2004, at the Alumni Center.



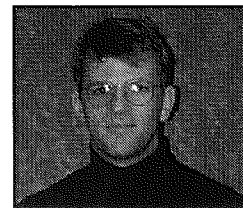
Cal Messersmith and Pat Jensen

Individuals were nominated by their colleagues and an honorarium was given to individual award winners in each category. Those receiving awards

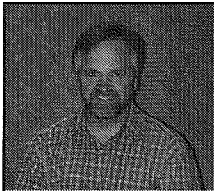


Rich Zollinger and Pat Jensen

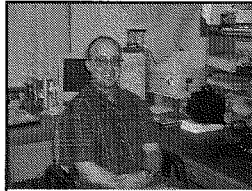
in the Department of Plant Sciences were: Chiwon Lee, H. Roald and Janet Lund Excellence in Teaching Award; Calvin Messersmith, William J. and Angelyn A. Austin Advising Award for Excellence; Richard Zollinger, AGSCO Excellence in Extension Award; and Stan Stancyk, Rick and Jody Burgum Technical Staff Award for Excellence.



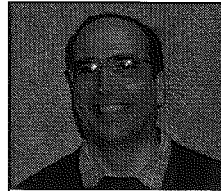
Stan Stancyk



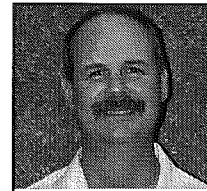
Burton Johnson



Bill Berzonsky



Frank Manthey



Ted Helms



Paul Schwarz

Drs. Burton Johnson, Bill Berzonsky and Frank Manthey were promoted to Associate Professor and granted tenure. Dr. Ted Helms and Dr. Paul Schwarz were promoted to Professor. This year we have one assistant professor being considered for promotion and tenure. No final decisions have been made at this time.



Marisol Berti

Marisol Berti was selected by a faculty committee as the department recipient of the Gerald O. Mott scholarship. Jenna Jansen was selected as the outstanding senior in CWS.



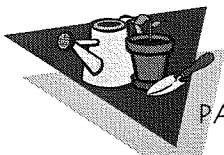
Jenna Jansen

Sports and Urban Turfgrass Management student Matthew Pap received a \$1,000 scholarship from the North Dakota Golf Association. NDGA offers this scholarship every year to students in North Dakota, South Dakota, Minnesota and Eastern Montana. Congratulations Matt!

Last year I reported that the coveted "Bison Chip" award was won by Dr. Ron Smith. Since our merger with hort over ten years ago, they (mostly Ron Smith) have dominated this award. The 2005 winner is Dr. Alan Dexter, who through his technical skill and vision, was able to break the hold of the hort faculty over this prestigious award.

I also have some sad news to report--the death of Dr. Glenn S. Smith. Dr. Smith was born Dec. 21, 1907 in a sod house near Antler, ND, and died Nov. 10, 2004. He was preceded in death by his wife of 74 years, Doris, by 15 days. He was raised in Dickinson, ND where his father worked at the Dickinson USDA Experiment Station. Dr. Smith attended North Dakota Agricultural College (now North Dakota State University) in Fargo and graduated with his B.S. degree in Agronomy in 1929. He received his M.S. degree at Kansas State University in Manhattan, KS in 1931. He received his Ph.D. degree in Plant Genetics from the University of Minnesota in 1947. His first position was in 1931 with the USDA at the Langdon, ND Agricultural Experiment Station. He moved to Fargo in 1934 where he worked as plant agronomist for the USDA specializing in breeding durum wheat varieties to eliminate stem rust, shorten stem height, and increase quality of varieties for eventual durum sale to the pasta industry. His durum varieties 'Carleton', 'Stewart', and 'Nugget' were

instrumental in improving North Dakota's farm economy and brought international recognition to the quality of North Dakota wheat. After 1951, Dr. Smith worked to improve hard red spring wheat leading to the release of four new varieties, the most widely grown being 'Justin' and 'Waldron'. In 1954, Dr. Smith was named the first Dean of the North Dakota State University Graduate School. In Dr. Smith's last year of active employment with NDSU, he served as visiting wheat scientist at La Estanzuela Station, Uruguay, from 1977 to 1978. In 1979 he was invited back to Uruguay by its government and by the United Nations FAO to conduct an evaluation of teaching, extension and research in cereals and industrial crops. Dr. Smith received many honors and awards, including ASA Fellow and induction into the North Dakota Agricultural Hall of Fame. A large teaching auditorium in Loftsgard Hall, where the Plant Sciences Department is housed, was named in his honor.



On a much brighter note, we had two faculty marriages in the department. Dr. Cal Messersmith married Lois Rosenau in late May and Dr. Xiwen Cai married Xunfen Chen in November. **Best wishes to all of you from everyone in the department!**



Many of our faculty, staff and students have also added beautiful babies to their families. Congratulations to all of you!

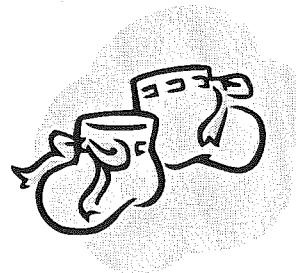
A baby girl, Lauryn Jae, was born to Kelly and Chantia McMonagle on June 14th, 2004. She weighed 7lbs, 15oz. and was 20 1/4 inches long. Lauryn was welcomed home by Taniel (10) and Sean (5).

Jeremy and Shana Pederson welcomed Aidan Marcus Pederson into their family on September 29, 2004. Aidan weighed 8 lbs, 5 oz and was 20 inches long.

Marci Green and Jose Gonzalez are the proud parents of Tomás Alexander González. He was born October 12, 2004, weighed 5 lbs, 12 oz and was 19 1/2 inches long.

A baby boy, Diego Carena-Santiago was born to Marcelo Carena and Irene Santiago Dec. 19, 2004. He weighed 7 lbs, 15 oz and was 20 inches long. Diego was welcomed home by an older brother, Martin.

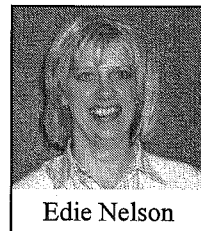
Monisha and Partha Chakraborty and older sister Eesah, welcomed home a baby girl, Rheeya, born January 5, 2005 She was 19" long and weighed 8 lbs, 10oz.



That about takes care of my portion of the Blizzard Watch. If you are in the Fargo area, stop in and visit us. If you know of any potential graduate students, send them our way. Also visit us on the web at <http://www.ag.ndsu.nodak.edu/plantsci/>. If you have any questions or comments and need to contact me call 701-231-8137 or email me at albert.schneiter@ndsu.edu. I hope all of you have a great professional and personal year and your loved ones are all safe and sound.

See you next year,
Al Schneiter
Professor and Chair

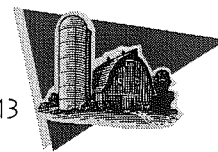
Edie Nelson
Administrative Secretary



Edie Nelson

Plant Sciences Faculty

| | | | |
|-----------------------|--|--------------------|--|
| Schneiter, A. A. | Prof. & Chair (<i>crop production</i>) | Kegode, G. O. | Asst. Prof. (<i>weed biology & ecology</i>) |
| Berglund, D. R. | Prof. (<i>ext. agr., row crops, specialty crops</i>) | Kianian, S. F. | Assoc. Prof. (<i>HRS, durum wh. germ. enhanc.</i>) |
| Berzonsky, W. A. | Assoc. Prof. (<i>HWS, spec./sawfly wheat brdg.</i>) | Lee, C. W. | Prof. (<i>ornamentals, turf/biotech.</i>) |
| Cai, X. | Asst.Prof (<i>wheat genetics</i>) | Li, D. M. | Asst. Prof. (<i>sports turf management</i>) |
| Carena, M. J. | Asst.Prof. (<i>corn breeding and genetics</i>) | Lym, R. G. | Prof. (<i>perennial weed control</i>) |
| Chakraborty, M | Asst. Prof. (<i>HRS wheat end-quality</i>) | Manthey, F. A. | Assoc. Prof. (<i>durum and pasta quality</i>) |
| Christoffers, M. J. | Asst. Prof. (<i>weed science/genetics teaching</i>) | McClellan, P. E. | Prof. (<i>dry bean genetics, biotechnology</i>) |
| Dai, D. W. | Asst. Prof. (<i>woody plant phys./biotech.</i>) | McMullen, M. S. | Assoc. Prof. (<i>oat breeding and genetics</i>) |
| Deckard, E.L. | Prof. (<i>crop physiology</i>) | Mergoum, M. | Assoc. Prof. (<i>HRSW breeding</i>) |
| Dexter, A. G. | Prof. (<i>ext. weed phys., sugarbeets</i>) | Messersmith, C. G. | Prof. (<i>weed science, physiology</i>) |
| Elias, E. M. | Prof. (<i>durum wheat breeding</i>) | Meyer, D. W. | Prof. (<i>forage prod. and physiology</i>) |
| Franckowiak, J. D. | Prof. (<i>2-row barley breeding, genetics</i>) | Ransom, J. K. | Assoc. Prof. (<i>ext. agronomist, sm grains</i>) |
| Grafton, K. F. | Prof. (<i>dry bean breeding</i>) | Schwarz, P. | Prof. (<i>malting barley quality</i>) |
| Hammond, J. J. | Prof. (<i>flax/crambe brdg, computer prog.</i>) | Smith, R. C. | Prof. (<i>extension horticulture/turfgrass</i>) |
| Hatterman-Valenti, H. | Asst. Prof., (<i>high value crop prod.</i>) | Thompson, A. L. | Asst. Prof. (<i>potato breeding</i>) |
| Helms, T. C. | Prof. (<i>soybean breeding, genetics</i>) | Thostenson, A. | Ext. Spec. (<i>pesticide program spec.</i>) |
| Herman, D. E. | Prof. (<i>woody plants, ornamentals</i>) | Williams, M. D. | Seedstocks Director |
| Horsley, R. D. | Prof. (<i>6-row barley brdg, genetics</i>) | Zeleznik, J. D. | Ext. Forester (<i>urban/rural forestry</i>) |
| Howatt, K. A. | Asst. Prof. (<i>weed science-annual weeds</i>) | Zollinger, R.K. | Assoc. Prof. (<i>extension weed control</i>) |
| Johnson, B. L. | Assoc. Prof. (<i>sunflower, minor, new crop prod.</i>) | | |



Adjunct Professors

| | |
|------------------|---|
| Anderson, J. V. | USDA (<i>plant biochemistry</i>) |
| Campbell, L. G. | USDA (<i>sugarbeet genetics</i>) |
| Carr, P. M. | Dickinson Res/Ext Center (<i>sustainable ag.</i>) |
| Chao, S. | BRL/USDA (<i>genomics</i>) |
| Chao, W. S. | USDA (<i>molecular biology/weeds</i>) |
| Dahleen, L. S. | USDA (<i>barley genetics, biotechnology</i>) |
| Faris, J. D. | USDA (<i>wheat molecular genetics</i>) |
| Foley, M. E. | USDA (<i>weed biology</i>) |
| Henson, R. A. | Carrington Res/Ext. Center (<i>crop prod.</i>) |
| Horvath, D. P. | USDA (<i>perennial weed physiology</i>) |
| Hu, Jinguo | USDA (<i>sunflower genomics</i>) |
| Jan, C. C. | USDA (<i>sunflower cytogenetics</i>) |
| Jauhar, P. P. | USDA (<i>wheat cytogenetics</i>) |
| Klotz, K. L. | USDA (<i>sugarbeet physiology</i>) |
| Lulai, E. C. | USDA (<i>potato physiology</i>) |
| Miller, J. F. | USDA (<i>flax and sunflower genetics</i>) |
| Seiler, G. J. | USDA (<i>sunflower/sugarbeet germplasm</i>) |
| Sowokinos, J. R. | USDA (<i>potato physiology</i>) |
| Suttle, J. C. | USDA (<i>potato physiology</i>) |
| Xu, S. S. | USDA (<i>HRS development</i>) |

Postdoc. Research Fellow/ Visiting Scientists, Project leader, Country, Area of Research

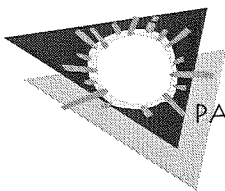
| | |
|---------------------|--|
| Abu Hamad, W. | Elias (Jordan - <i>durum wheat breeding</i>) |
| Chen, J. | Hu (China - <i>sunflower genomics</i>) |
| Duan, L. | Cai (China - <i>wheat genetics</i>) |
| Feng, J. | Jan (China - <i>sunflower cytogenetics</i>) |
| Gelin, J. | Grafton (Haiti - <i>bean breeding</i>) |
| Gonzalez, J. | Kianian (Spain - <i>scab resistance/spr wht</i>) |
| Gu, X. | Foley (PRC - <i>weed biology</i>) |
| Hossain, K. | Kianian (Bangladesh - <i>wheat genomics</i>) |
| Jia, Y. | Chao (China - <i>perennial weeds</i>) |
| Lu, H. | Faris (China - <i>wheat genetics</i>) |
| Niu, Zhi Xia | Elias (China - <i>durum breeding</i>) |
| Pak, Chun Ho | Lee (Korea - <i>ornamentals</i>) |
| Rojas-Cifuentes, G. | Grafton (Chile - <i>bean breeding</i>) |
| Satyavathi, V. | Jauhar (India - <i>wheat cytogenetics</i>) |
| Singh, P. | Mergoum (India - <i>wheat breeding</i>) |
| Tobias, D. | Dahleen (Manila - <i>barley genetics/biotech</i>) |
| Zhou, L. | Lulai (China - <i>potato physiology</i>) |

Research Specialists/ Technicians/Chemists

| | |
|------------------|-------------------------|
| Auwarter, Eric | (potato breeding) |
| Auwarter, Collin | (high value crop prod.) |
| Barr, John | (malting barley) |
| Baumann, Robert | (oat breeding) |
| Bellon, Mike | (seed processing) |

Research Specialists/ Technicians/Chemists cont

| | |
|----------------------------|-----------------------------------|
| Chaput, Larry | (woody plants) |
| Christianson, Katheryn | (perennial weeds) |
| Ciernia, Mark | (weed control) |
| Davidson-Harrington, Janet | (weed science) |
| Deckard, Brenda | (student services director) |
| Duppong, Lisa | (high value crop production) |
| Erickson, Ann | (potato breeding/genetics) |
| Faller, James | (HRS wheat breeding) |
| Faller, Jason | (barley breeding) |
| Farnsworth, Bryce | (potato breeding) |
| Genoch, Roger | (barley breeding) |
| Gillespie, James | (malting barley quality) |
| Green, Marci | (barley breeding) |
| Gregoire, Pete | (crop physiology) |
| Halley, Jeremiah | (HRSW breeding) |
| Hanson, Dave | (soybean breeding) |
| Hatzenbeller, Debra | (malting barley quality) |
| Hegstad, Justin | (wheat germplasm enhancement) |
| Hinsz, Brent | (durum and pasta quality) |
| Hochhalter, Martin | (barley breeding) |
| Kercher, Kreg | (durum wheat breeding) |
| Klindworth, Daryl | (wheat genetics/USDA) |
| Lafta, Abbas | (potato physiology) |
| Laschkewitsch, Barb | (vegetables & perennials) |
| Leach, Gene | (hard spring wheat) |
| Lee, Rian | (dry bean genetics/biotechnology) |
| Lindberg, Lyle | (flax breeding) |
| Luecke, John | (sugarbeet weed control) |
| Magnuson, Victoria | (woody plants biotechnology) |
| Maianu, Josef | (seedstocks) |
| Mark, Sandra | (weed science) |
| Martin, Larry | (soybean breeding) |
| McArthur, Rachel | (wheat genetics) |
| McMonagle, Kelly | (durum quality) |
| Meyer, Scott | (extension small grains) |
| Neubauer, Jonathon | (durum quality) |
| Nudell, Robert | (forages) |
| Olson, Rachel | (wheat quality) |
| Olson, Truman | (wheat quality) |
| Pederson, Jeremy | (seedstocks) |
| Pederson, Shauna | (weed science) |
| Petersen, Paula | (crop production) |
| Ries, Jerry | (weed survey) |
| Roach, Ron | (weed control) |
| Stancyk, Stan | (durum breeding) |
| Underdahl, Sarah | (durum breeding) |
| VanderWal, Jody | (dry bean breeding) |
| Wanner, Duane | (corn breeding) |
| Wentz, Mary | (wheat germplasm enhancement) |
| Wijetunga, Theja | (molecular markers) |
| Zhou, Zing Kai | (weed science) |



Graduate Students and Advisors 2004-2005

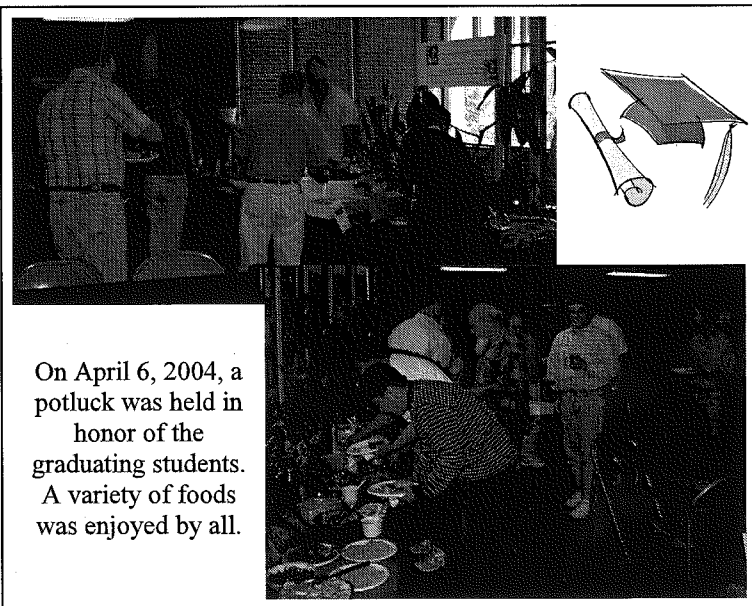
BLIZZARD WATCH

Barata, Clarissa
 Bergh, Lisa
 Berti, Marisol Tatiana
 Bhamidimarri, Suresh
 Caffarel, Juan Carlos
 Carlson, Aaron
 Carlson, Andrea
 Chen, Xunfen
 Chen, Zhiwei (Allen)
 Chenggen, Chu
 Dahl, Lisa
 Dash, Snigdharani
 Davies, John
 Delahoyde, Eric
 Dilawari, Mridull
 Ehli, Arielle
 Eidenshink, John
 Gamotin, Emma
 Gebhard, Bryan
 Ghosh, Pradyot
 Hatzenbeller, Mark
 Holthusen, Robbie
 Hu, Min
 Huhn, Melissa
 Jacobson, Kevin
 Jha, Ajay
 Johnson, Chris
 Jumbo, McDonald
 Juricek, Chelsea
 Kandikonda, Aruna
 Kloster, Jamie
 Krashennik, Nadejda
 Krippner, Sarah
 Kumar, Sunil

Carena
 Horsley
 Johnson
 Kianian/Elias
 Franckowiak
 Dexter
 Smith
 Faris
 Hatterman-Valenti
 Faris
 Howatt
 Johnson
 Berzonsky
 Zollinger
 Kianian
 Thompson
 Berzonsky
 Berzonsky
 Berzonsky
 Chakraborty
 Schwarz
 Johnson
 Carena
 Elias
 Dexter
 Dahleen
 Dai
 Carena
 Lym
 Christoffers
 Messersmith
 Franckowiak
 Howatt
 Faris

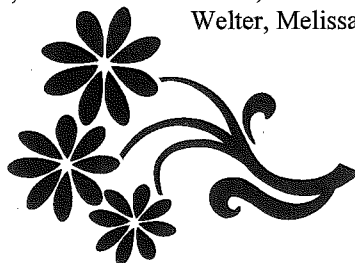
Lamb, Kenneth
 Lee, Sung Eun (Theresa)
 Lin, Rongshuang
 Lubenow, Lesley
 Mamidi, Sujun
 Matkovic, Kornelija
 Mathew, Sudeep
 Melani, Marcelo
 Michalak, Monika
 Mittal, Shipra
 Musial, Matthew
 Nazre, Gauri
 Oberoi, Kiran
 Odron, Genaro
 Oliver, Rebekah
 Osorno, Juan Manuel
 Ostby, Clint
 Reddy, Leela
 Rust, Jamie
 Sadosky, Paul
 Samuel, Luke
 Schorno, Anton
 Schumacher, Carrie
 Sebelius, Angela
 Sezegen, Bahadir
 Silva, Fernanda
 Singh, Keti
 Underdahl, Jisse
 Varanasi, Vijaya
 Vilaro, Diego
 Waletzko, Angela
 Wang, Ju
 Wang, Tao
 Werk, William
 Willard, Deborah
 Xu, Xin
 Yu, Goutai
 Zhang, Guorong
 Zhang, Zeng Cui

Horsley
 Lee
 Horsley
 Johnson
 McClean
 Chakraborty
 Hatterman-Valenti
 Carena
 Kianian
 Dahleen
 Schwarz
 Kegode
 Kianian
 Schwarz
 Cai
 Carena
 Mergoum
 Faris
 Kianian
 Schwarz
 Lym
 Manthey
 Hatterman-Valenti
 McMullen
 Carena
 Thompson
 Manthey
 Mergoum
 Horvath
 McMullen
 Hatterman-Valenti
 McClean
 Cai
 Helms
 Hatterman-Valenti
 Elias
 Franckowiak
 Mergoum
 Faris/Xu



On April 6, 2004, a potluck was held in honor of the graduating students. A variety of foods was enjoyed by all.

Aanstad, Robin
 Anderson, Julie
 Blaskowski, Michelle
 Brantseg, Sue
 Buringrud, Eileen
 Heinz, Louise
 Johnson, Lisa
 Nelson, Edie
 Odegaard, Mary Beth
 Perrin, Char
 Welter, Melissa





Dr. Jack & Imogene Carter

First, thank you for the holiday messages and several photos that came from you to the department or to us personally, and other messages via e-mail coming mostly to Mrs. Carter at imsym@aol.com. We appreciate letters, and especially photos, very much and wish to "keep track"--please tell us more about yourself and your families. Send pictures, even if you may have aged since we last met--we all do! Several former graduate students plan to visit us and NDSU in summer, 2005. I passed 85 years last October 2004! Imogene is not far behind, passed 39 for sure!! And we will have our 64th wedding anniversary October 19, 2005. Some of you donated to the Jack Carter Endowed Professorship fund, too, and thanks, or if not, it's not too late to give. Send to the NDSU Development Foundation, 1241 North University Drive, Fargo, ND 58105.

My health problem reported last year fortunately seems quite stable, although took a little dip for 2 to 3 weeks in February, 2004, due, the experts think, to bad interaction of two prescribed medicines. It seems that one of us has a clinic visit every week or two for routine or other reasons. I mostly feel good and continue usual activities at home or NDSU most days, and outdoors in growing season. Imogene continues to be troubled by an imbalance problem that is not treatable. Our five children and families continue to live and work as in past years--some of you know them. Four of the families visited for Christmas and I prepared for 13 people at Christmas dinner! Our

oldest grandson was married in 2002 and we have been great-grandparents of a precocious young lady since June, 2003.

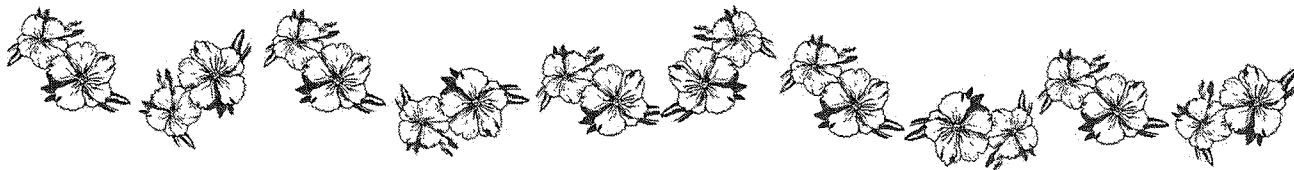
I'm still President of the Flax Institute of the United States. I also serve as "flax consultant" to the North Dakota Oilseed Council and supervise some of the research that they fund. Flaxseed provides healthful omega 3 fatty acid, lots of dietary fiber and anticarcinogenic lignans in human nutrition, and for other animals. I recommend your eating about 30 grams or 1/5 cupful of ground flax per day in orange juice, baked foods, or whatever. Flaxseed has been consumed for hundreds of years by people in the countries of some former international students. Please request a flax-for-food leaflet or look at our website <http://www.ndsu.nodak.edu/flaxinst/> if you wish to learn more.

Mostly at home I have been doing more cooking than formerly, some maintenance, gardening, and fishing. I grafted five apple trees to multi-variety trees to sell at Bidder's Bowl, and for special friends, and attended Bidder's Bowl (raises funds for NDSU Development Foundation) in October, 2004. Also, we attend home games of Bison football and basketball, especially the lady basketball Bison. NDSU has gone Division IAA in sports, so many of the games are with institutions of which we know little. The lady Bison basketball team is undefeated so far this year.

In retrospect, many of you have influenced our work and lives favorably, and we yours, we hope. We are unlikely to attend future Agronomy meetings and the Blizzard Party, so please stop to see us as you pass this way, or write or e-mail, and best wishes for a HAPPY and HEALTHFUL 2005.

Dr. and Mrs. Carter

*(personal e-mail imsym@aol.com)
(NDSU e-mail lisa.johnson@ndsu.edu)*





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 P.O. Box 5051
 Fargo, ND 58105-5051

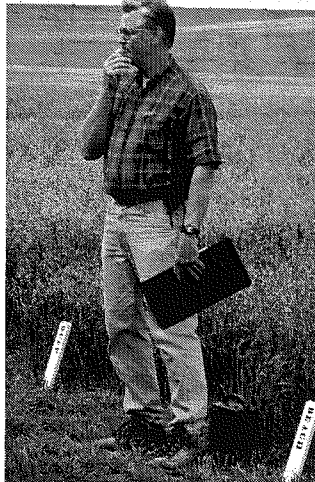
Phone: 701-231-7971
 Fax: 701-231-8474
 Email: albert.schneider@ndsu.edu

Address Service Requested

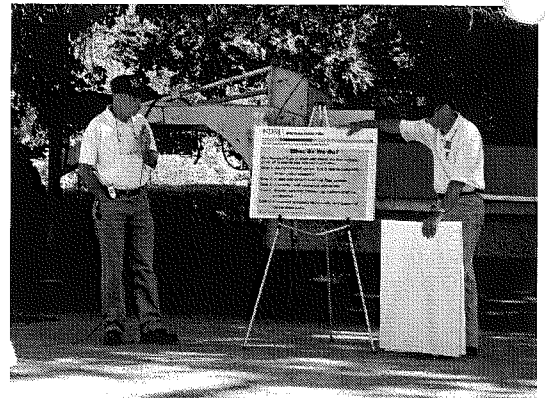
Eileen



Field Days 2004



Dr. McMullen must have had a tough question.



Dr. Grafton and Duane Hauck at Carrington



Dr. Mergoum at Hettinger



Flax variety trial